REMARKS

Claims 14-17 are currently pending. Claims 1-13 have been previously cancelled. Claims 14, 16, and 17 are herein amended. Support for the amendments can be found, for example, in the Specification at page 1, title, or page 1, lines 8 and 10.

No new matter has been added.

Claim Rejections – 35 USC § 103

In the Office Action, the Examiner rejects claims 14-17 under 35 U.S.C. § 103 as being unpatentable over Haynes (U.S. Patent 5,169,669) in view of evidence presented in NPL "Vegetable oil FA Composition" and in view of Gilbertson, (U.S. Patent 6,166,076).

The present claims describe a method for enhancing the body taste of foods by cooking the foods with a fat and oil which was prepared by adding an n-3 long-chain highly unsaturated fatty acid having 20 or more carbons and 3 or more double bonds or an n-6 long-chain highly unsaturated fatty acid having 18 or more carbons and 3 or more double bonds (claim 14). Once prepared, the fat and oil includes 10-100,000 ppm of the n-3 long-chain fatty acid or the n-6 long-chain fatty acid (*e.g.*, claim 14).

Haynes discloses cooking oils which have a reduced tendency to produce offensive odors when heated (Haynes, abstract). Haynes specifically describes "canola oil" in col. 5, lines 16-20; although, safflower, cottonseed, deodorized sunflower seed and corn oils and mixtures of these oils with canola, soybean or sunflower seed oil are also described in col. 5, lines 20-24. Gilbertson discusses the stimulation of taste buds with certain poly-unsaturated fatty acids (Gilbertson, abstract).

The Examiner acknowledges that Haynes does not teach "about (a) fat and amount of PUFA in the cooking oil and (b) 'enhancing body taste of foods'" (Office Action, page 3).

Applicants submit that one of skill in the art would have no reasonable expectation of success in generating body taste of foods. Gilbertson only describes electrophysiological recordings and analysis of in vitro cells. Gilbertson also speculates as to the effect on the basic tastes of salty, sour, sweet, and bitter (Gilbertson, col. 3, line 29; col. 9, lines 47-52).

Gilbertson does not describe the taste actually detected by a mouse, and such enhancement of even conventional tastes is unsupported by actual data describing the taste that is actually detected in a person. The actual taste sensed by the individual is clearly just a speculation, as in Gilbertson, Examples 24 and 25 use the present and future tenses in the description on col. 9, lines 47-52.

Furthermore, Applicants herein present evidence which demonstrates that the fatty acids which depolarize mouse taste receptor cells do not affect the intensity of basic tastes evaluated by the human panelists (*see* Reckmeyer *et al.*, Journal of Sensory Studies 25 (2010) 751-760, Abstract: "Neither linoleic or oleic fatty acids increased or decreased the intensity of any of the four tastants."). Thus, even with conventional tastes, one of skill in the art would have no reasonable expectation that the claimed methods would enhance the taste of the food.

Moreover, one of skill in the art would have no reasonable expectation of success that the present invention would enhance body taste. First, as discussed above, the data from mouse in vitro analysis is not necessarily applicable to human tastes. Second, even if that data was applicable, one of skill in the art would not expect that the fatty acids of the present invention would enhance taste. Gilbertson, in a publication related to U.S. 6,166,076[1], demonstrated that while the free fatty acid alone (*e.g.*, arachidonic acid) stimulated the taste receptors, the methyl ester of arachidonic acid does not inhibit the outward K+ currents (*see* Gilbertson (1997), page C1208, left col., Figure 7).

[1] Gilbertson, *et al.*, "Fatty Acid modulation of K+ channels in taste receptor cells gustatory cues for dietary fat" American Journal of Physiology: Cell Physiology, C1203-C1210 (submitted 1996, published 1997), cited in U.S. 6,166,076 at col. 10, lines 19-23 as an unpublished manuscript.

In contrast, the Specification demonstrates that an ester of arachidonic acid (AA-containing triglycerides: AATG) enhances taste (*See, e.g.*, beginning at page 15 of the Specification, where in Examples 1-3 the 2% AATG added to pork extract at a concentration of 0.05% demonstrated a much stronger or much better taste than control). Thus, in view of the teachings of Gilbertson (1997), one of skill in the art would have no reasonable expectation of success that the compositions of the present invention would enhance taste. Applicants accordingly request that the rejection be withdrawn.

Moreover, Applicants submit that the flavor generated is not simply an enhanced salty, sour, sweet or bitter taste. Instead it is a new flavor, KOKUMI. Gilbertson, col. 1, beginning at line 64, teaches the "basic tastes of salty, sour, sweet, and bitter." "Body taste" (KOKUMI), like UMAMI, is a completely different taste from "salty, sour, sweet, and bitter." This totally new, synergistic, blended flavor in the foodstuff is recognized in the art as KOKUMI. KOKUMI has been described as a new flavor having "thickness, continuity and mouthfulness" (Yamamoto *et al.* (2009) and FoodTechnology (August 2004), both attached). Thus, the combination of Haynes, Gilbertson, and Vegetable Oil FA fail to provide any reason for one of skill in the art to produce KOKUMI, or any reasonable expectation that body taste (KOKUMI) could be produced. Applicants therefore submit that the Examiner has failed to establish that the combined references teach every feature of the claimed invention and request that the rejection be withdrawn.

Conclusion

In view of the above remarks, all of the claims are submitted as defining non-obvious, patentable subject matter. Reconsideration of the rejections and allowance of the claims are respectfully requested. Applicant believes the pending application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Susan W. Gorman, Ph.D., Reg. No. 47,604 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), Applicant(s) respectfully petition(s) for a one (1) month extension of time for filing a reply in connection with the present application, and the required fee of $130.00 is attached hereto.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

#47,604

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Attachments: Reckmeyer et al.
Gilbertson, Cell Physiology
Yamamoto et al. (2009)
FoodTechnology (August 2004)